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SESSION ID: SBV-M02

Better Tabletop Exercises: Bringing Operations to the Table

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@brysonbort

SCYTHE

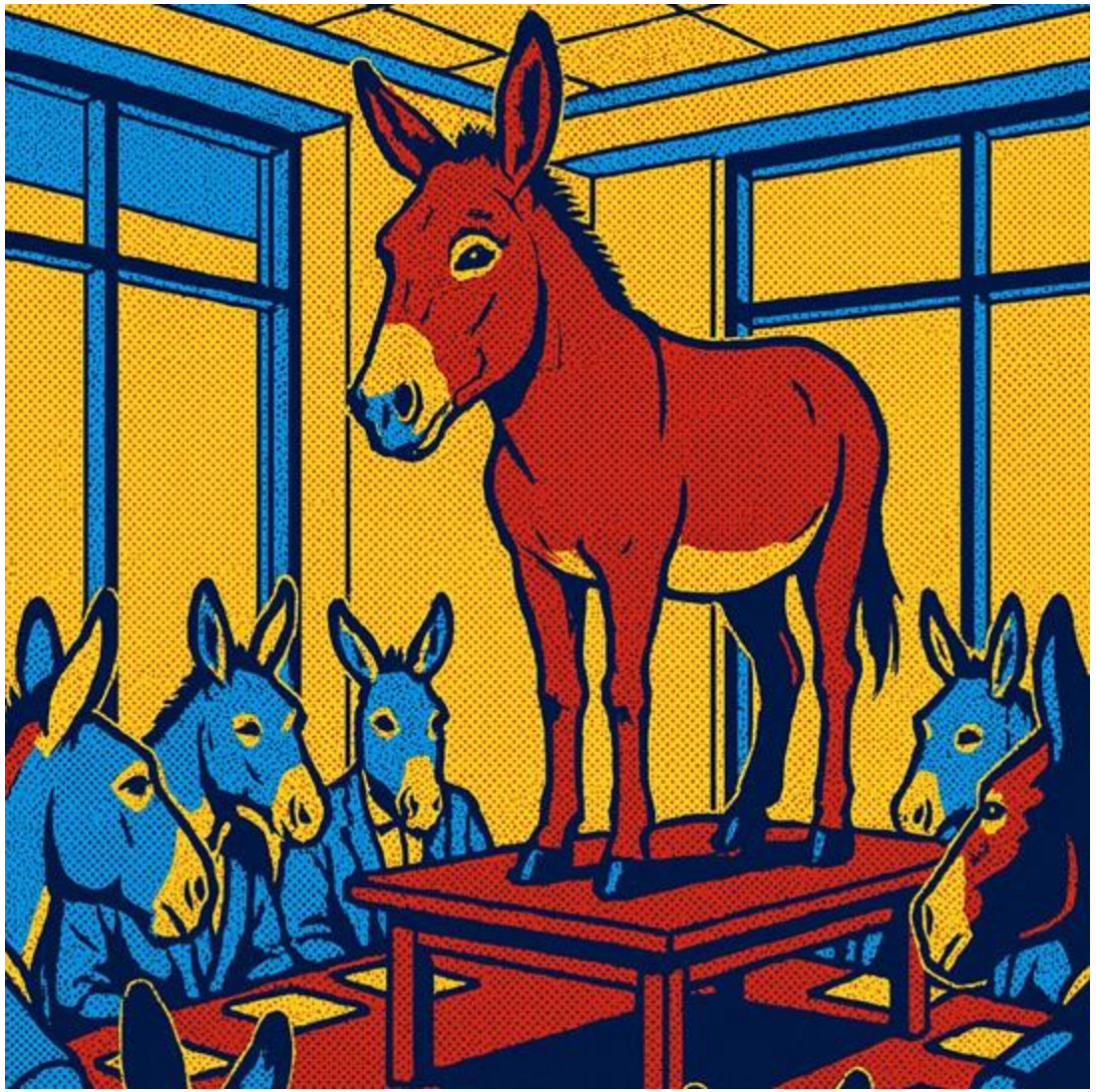
ICS

GRIMM

> Who Am I ?

- George “Trey” Bilbrey @tcraf7
- Professional Services Lead @ SCYTHE
- Co-Founder and community leader for NEON TEMPLE
- Certs and things..

Who Has Been Through A TTX Before?



Current Landscape

Weighed & Measured

There is no immediate **validation** of whether these plans actually work under real-world conditions.

Leadership and security teams **assume** security controls, playbooks, and procedures will work as expected

…but assumptions can be **dangerous**.

Assumptions

- Responses tend to be **hypothetical**:
  - “We would follow our incident response plan.”
  - “We have a policy for handling ransomware.”
  - “Our team knows what to do in this scenario.”

- Tool capabilities
  - “Our EDR would block that”
  - “We have PowerShell locked down”

- Common knowledge to one team member is known by all..

CTEM

5 Steps in the Cycle of Continuous Threat Exposure Management
5
Mobilization
1
Scoping
Action
Diagnose
4
Validation
2
Discovery
3
Prioritization
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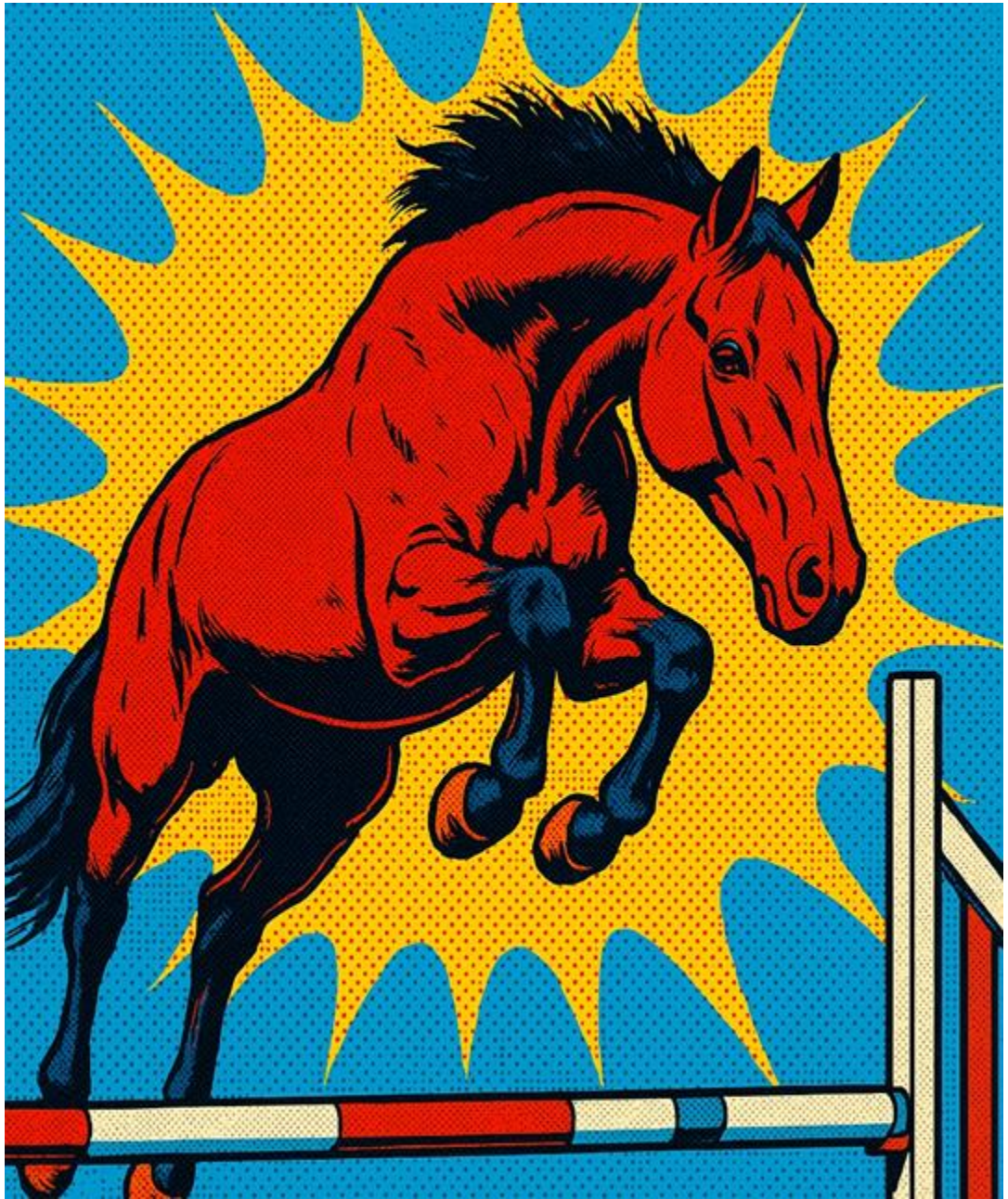
What If We Can Do Better?

A Better Way



Compliance

- Existential foundation of business ops

- 2 kinds of leadership, Those that care about security…
  and those that don't.

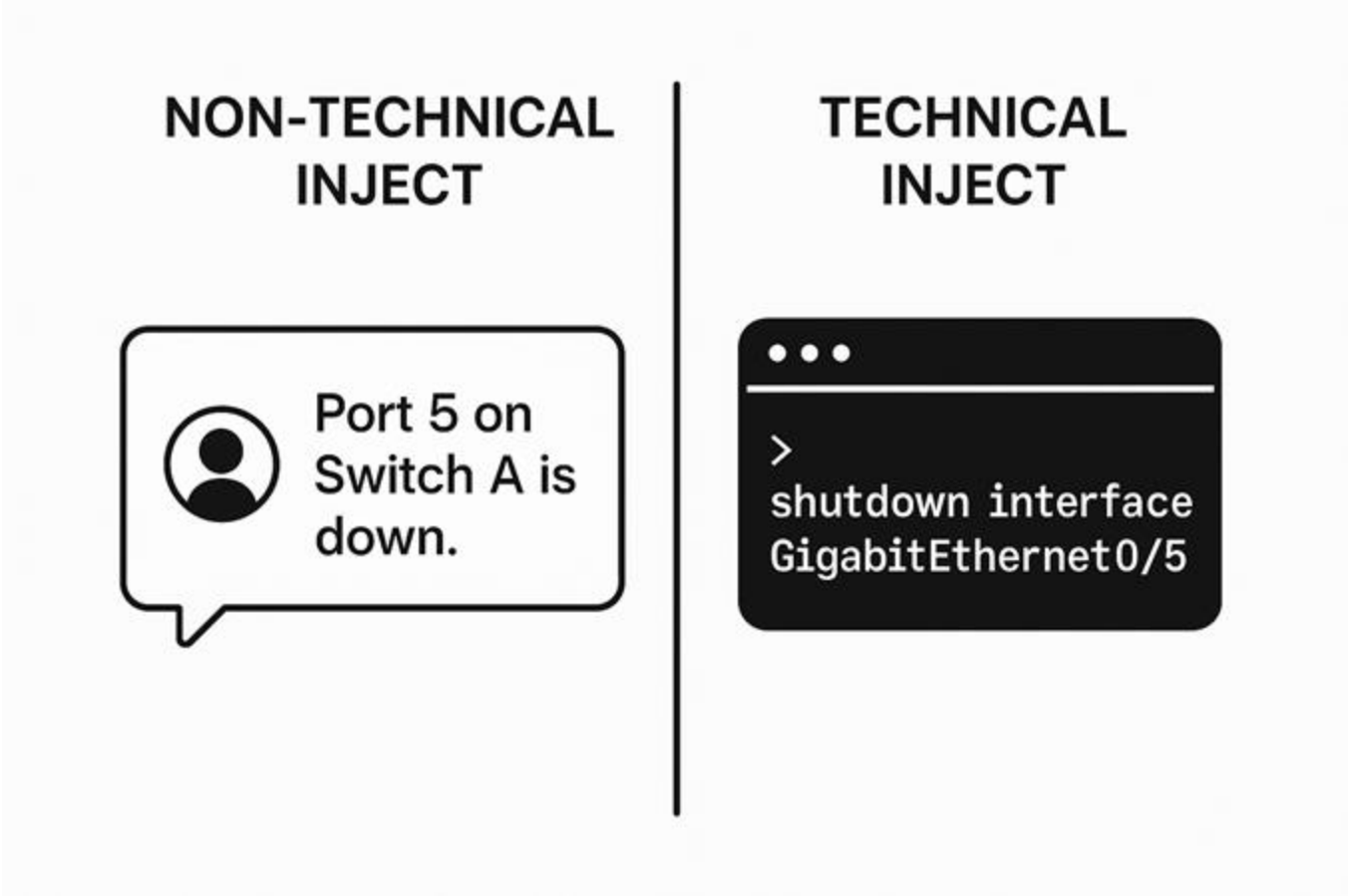
Changing Our Stars

Moving from a compliance-driven approach to a continuous improvement model

Criteria	CTEM	Compliance-Based Security
Effectiveness	**High** Targets real threats with continuous validation.	**Moderate** Ensures baseline controls are met.
Risk Reduction	**Moderate / Proactive** Reduces risk based on threat exposure exploitability.	**Low / Reactive** Analyzes risk periodically.
Attack Prevention	**High / Advanced** Identifies and mitigates before exploitation	**Low / Basic** May miss evolving or new threats.

Reinforcing The Scenario

Incorporating a real-world attack simulation into TTXs allows teams to practice incident response under realistic conditions.



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How We Did It

How We Did It

- Defined Scope for testing that includes **EVERYONE**
- Crafted a narrative to include:
  - hands on participation via PTE injects
  - non-technical validation injects based on scope
- Add injects where the team has to demonstrate proficiency, not just lip service
  - “Show me where its documented”
  - “Did you get alerts on X behavior?”

Defining our Scope

- What is the goal of the assessment?
- What do we have access to?
  - Assets
  - Knowledge
  - Personnel

What other teams can we involve? (legal, PAO, etc.)

Defining our Scope

Scenario #1 - Outline

1. **White card** : device plugged in > supply chain compromise
2. **Part WC / part technical** : vuln service used for access > initial foothold/persistence put in place
3. **Technical** : ingress tool transfer > download energyspark_upgrade.exe
4. **Technical**: host recon > host network settings
5. **Technical** : Ping Sweep > additional host discovery
6. **Technical / possible WC** : Lateral movement via Emergency Response Auditor.
7. **Non-Technical** : Identify C2 > build threat picture > Determine exposure
8. **Non-Technical** : endpoint containment > IR wrap-up

Kicking Things Off

Scenario #1 - Inject 1

- The Network Team reports that a network switch in a field office is reporting a number of port shutdown events.
- Further investigation by the network team identifies the same MAC address connecting to the switch on multiple ports triggering the port security shutdown.
- The Network Team reports this to the SOC as a suspicious event.

```
(4096 bytes):

%PM-4-ERR_DISABLE: psecure-violation error detected on Fa0/1, putting Fa0/1 in e
%PORT_SECURITY-2-PSECURE_VIOLATION: Security violation occurred, caused by MAC .
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state n
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to down
```

Blending Non-technical & Technical Injects

Request (3/10/2025, 1:48:10 PM)

```
--cmd (New-LocalUser -Name "barnesjb" -Password (ConvertTo-SecureString 'P@ssW0rd11!!' -AsPlainText -Force) -
FullName "James Bucky Barnes" -Description "The Winter Soldier's Admin Account")
```

Response (3/10/2025, 1:48:13 PM)

```
Name     Enabled Description
----     ------- -----------
barnesjb True    The Winter Soldier's Admin Account
```

```
--cmd (Add-LocalGroupMember -Group "Administrators" -Member "barnesjb")
```

Crafting A Story

- Telling a story will drive a great exercise.

Practice Briefing

- The engagements also include dry runs where teams would brief the exercise coordinators (or org leadership).
  - What do they know so far?
  - What is your next step?
  - Should you escalate?
  - Who else should be involved?

Proof Or It Didn't happen

- When policy or SoP would dictate how an inject was handled:
  - Can they point to the policy?
  - Do they understand it and where to find it?
  - Do their actions match what is documented?

Documentation Is Key

What's In It For You?

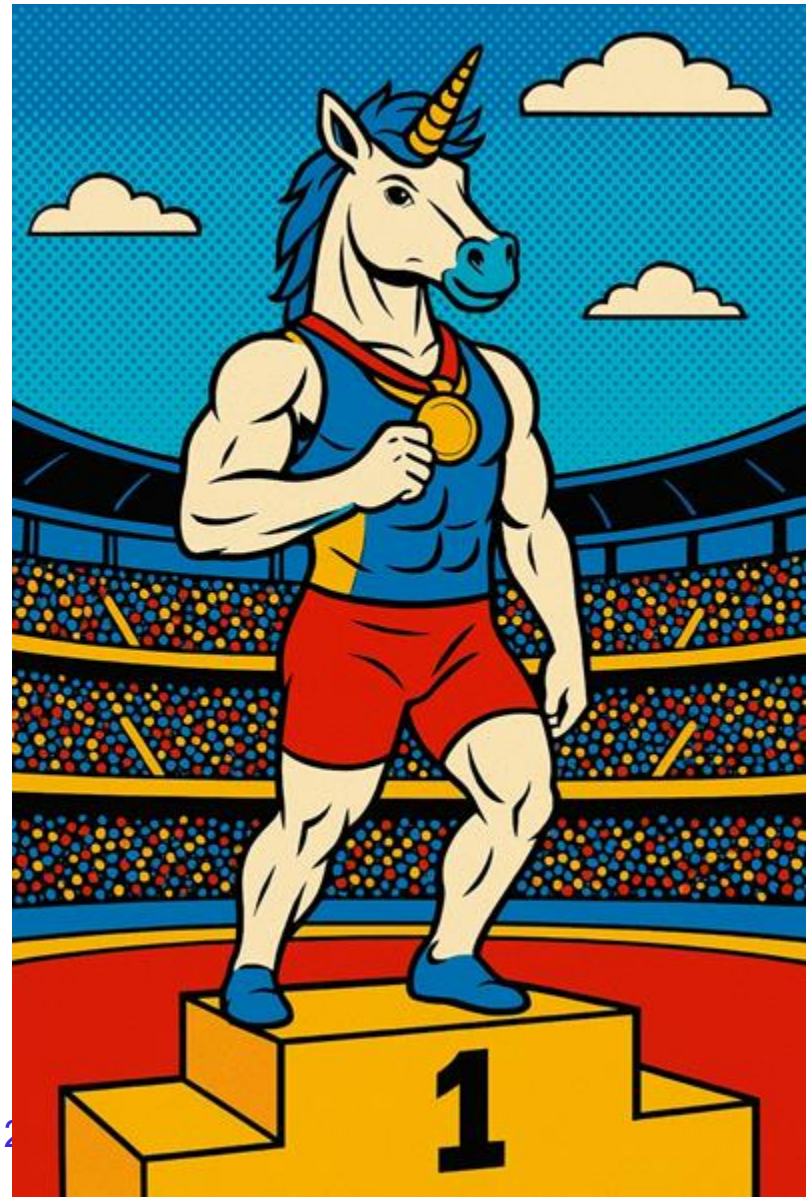
Continuous Refinement of your security posture:

- Personnel
  - Continuous training and adaptation to the threats you face
- Processes
  - Streamlined procedures and understanding of roles
- Tooling
  - Reduced noise and improved response times

Offensive Maturity Model

How To Apply This Approach

- Start with Purple Teaming
- Integrate PTEs with TTXs
- Leverage Data to Drive Decisions
- Make Security a Continuous Process



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Questions?